REMARKS/ARGUMENTS

While the Applicants have carefully reviewed the Examiner's rejections, they respectfully request the Examiner's further consideration of the reasons set out below.

RE: Claim Rejections – 35 U.S.C. § 112

Claims 1 and 12 have been amended to remove the working "at a minimal detectable level", therefore this rejection has been overcome.

RE: Claim Rejections – 35 U.S.C. § 102 and 35 U.S.C. § 103

Claims 1, 3-6, and 12-13 were rejected under 35 U.S.C §102(e) as being anticipated by Clark et al. US Publication no. 2004/0208516, and claims 2, 7-22 were rejected as being obvious in view of Clark.

The examiner continues repeating same rejections, which virtually word by word copied from the previous office action mailed September 06, 2007 and advisory action mailed December 05, 2007 without traversing or responding to the Applicant's arguments provided in the Applicants' response dated February 02, 2008.

Claims 1 and 12 have been amended to further clarify the language of these claims. In particular, step (c) has been amended to include limitations of "setting attenuation of attenuators on the optical link to substantially maximum attenuation and gradually decreasing the attenuation of the attenuators until the optical signal is detected", which allows to detect an optical signal at a minimal detectable level, and "detecting the optical signal at the monitoring point by detecting a dither tone modulated onto the signal to uniquely identify the optical signal". Both limitations have full support in the specification (paragraphs 0042, 0047, 0039, and Figure 2 of specification).

Accordingly, once again, the examiner is requested to provide comments to the following

arguments (and not only to the examiner's interpretation of Clark reference).

The examiner argues that Figures 3 and 5 of Clark disclose an optical system, wherein "the power control unit 360 control(s) the launch power (or start up power) of Tx 350 by adjusting (*i.e. gradually increasing or decreasing optical power of an optical signal - comments of the examiner*) of Tx 350 based on the SNR that is detected at the monitoring points".

As argued in the previous response, firstly, the Oxford dictionary defines "adjust" as "arrange, put in correct order or position, regulate". It does not describe a **gradual** change. Secondly, the present invention discloses not only increasing power gradually, but also increasing the power until an optical signal is just detectable, which is achieved by setting the attenuation of attenuators to a maximum level and gradually decreasing the attenuation until the optical signal is detected. This prevents damage of optical components due to excessive power.

Clark does not teach "setting attenuation of attenuators on the optical link to substantially maximum attenuation and gradually decreasing the attenuation of the attenuators, until the optical signal is detected". In contrast, Clark describes "adjusting the launch power profile" until various conditions are met, the most general of which is "until the determined power-related parameters substantially equal the set of desired parameters" (claim 17 of Clark). Clark does not suggest that the "desired parameters" are detecting an optical signal at a minimal detectable level, which is achieved by setting the attenuation of the attenuators to a maximum level and gradually decreasing the attenuation. Indeed, Clark further discloses the condition of producing "a substantially constant SNR profile over a subset of system spans", which is not related to the present invention.

In yet further contrast, Clark discloses **setting** power levels opposed to gradually increasing and detecting an optical signal at a minimal power level of the present invention. In particular, Clark states that "the process may begin by setting an initial launch power profile" [paragraph 0032 lines

4-5 of Clark]. Thus, unlike the present invention, Clark describes setting the power to a specific predetermined value. In the present invention, there is no predetermined power value to which the power is set, as disclosed in Clark. Then, Clark discloses calculating a pre-emphasis value to make SNR constant across wavelengths, the pre-emphasis value is added to the launch power.

Again, in Clark, it is a single adjustment of power to a calculated value, which is not present in claim 1 of this invention.

Additionally, the step (c) of the amended claim 1 includes "detecting the optical signal at the monitoring point **by detecting a dither tone modulated onto the signal** to uniquely identify the optical signal", which means that the presence or absence of the optical signal is identified by the presence of absence of additional low frequency signal (dither tone), which is different from the optical signal and is modulated onto the optical signal.

Although identifying optical signals with respective dither tones has been known in the industry, the present invention provides a unique way of powering up an optical network, including detecting the dither tones modulated onto respective optical signals instead of the optical signals when the optical signals are at a minimal detectable level. Detecting respective dither tones in this situation is easier and more reliable than detecting the optical signals, in particular when a predetermined list of dither tones is available in advance.

Therefore this feature is not only missing in Clark, but also cannot be obvious in view of Clark (as argued by the examiner with regard to previously presented claim 7) as it provides additional advantages for powering up the optical network reliably.

The examiner also refers specifically to the last sentence of paragraph 0033 of Clark: "Acts 505-520 may be selectively repeated until the measured SNR(lambda) is approximately constant". The present invention does not disclose measuring SNR and does not disclose adjusting power to make SNR(lambda) approximately constant. Also, the repetition of the step (c) in the present

invention is not selectively repeated as described in Clark, instead the step (c) as well as steps (d) and (e) of the present invention are repeated for every section in a link (step (f) of claim 1) and are done sequentially moving away from the transmitter (step (e) of claim 1).

The examiner further states that "if the SNR across each wavelength is not approximately constant, a pre-emphasis value is determined", which is erroneously equated with the step (d) of the present invention for verifying if the detected optical signal at the minimal detectable level is being detected at a correct location according to a network specification and if the power of the detected optical signal is at the expected level according to the network specification."

The Applicants submit that these two steps are **not** equivalent. In the present invention, step (d) verifies that the network is configured according to a network specification by verifying that an optical signal is at the correct location and at an expected power level. This is performed with the power of the optical signal at the minimum detectable level, as accomplished by the preceding step (c) of the present invention.

Thus, the step (d) of the present invention does not include calculating an operating power level, as Clark does by determining a pre-emphasis value.

Finally, the examiner states that "Clark further discloses in paragraphs 0032-0033 that the SNR may then be measured over a subset of spans, such as m spans of the n spans system, where m< n", and erroneously equates it with the step (e) of the present invention of selecting a next section of the optical link adjacent to the previously selected section and further away from the transmitter in the optical network." These two steps are **not** equivalent, because Clark does not disclose or suggest selecting each and every section of the optical link successively from the transmitter to the receiver.

Thus, Clark clearly does not have all the features of the amended claim 1, and therefore the present invention cannot be anticipated by Clark.

Amended claim 1 cannot be also obvious in view of Clark and general knowledge in the art, because it provides further advantages to the method of powering up an optical network when optical signals in the optical network are still at minimal detectable level, which have not been known or identified or discussed in the prior art.

Independent claim 12 has been amended similar to claim 1. Other claims depend on claims 1 or 12 and include further limitations.

Claim 8 has been amended to provide additional steps of "reconnecting the selected section of the optical link according to the network specification, if the step (d) of verifying gives the results that the detected dither tone is not being detected at the correct location, the step of reconnecting comprising setting attenuation of the attenuators to substantially maximum attenuation." This provides further advantages of powering up the optical network in a reliable manner, including reconnecting sections of optical links if dither tones have not been detected at correct locations, and **additionally** setting the attenuation of the attenuators to their maximum values.

Conclusion

No new matter has been added. As argued above, the present invention is neither anticipated by Clark nor is obvious in view of Clark, and therefore the examiner's rejections under 35 USC 102 and 103 have been overcome.

In view of the foregoing, a favorable consideration of the application is courteously requested.

Respectfully submitted,
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